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## WHAT IS CLAIMED IS:

- 1. A recombinant plant viral nucleic acid comprising a native plant viral subgenomic promoter, at least one non-native plant viral subgenomic promoter and a plant viral coat protein coding sequence, wherein said non-native plant viral subgenomic promoter is capable of initiating transcription of an adjacent nucleic acid sequence in a host plant and is incapable of recombination with the recombinant plant viral nucleic acid subgenomic promoters and said recombinant plant viral nucleic acid is capable of systemic infection in a host plant.
- 2. The recombinant plant viral nucleic acid of claim 1 which further comprises at least one non-native nucleic acid sequence adjacent a subgenomic promoter, said sequence capable of transcription in a host plant to produce a cellular product.
- 3. The recombinant plant viral nucleic acid of claim 1 wherein the plant viral coat protein coding sequence is adjacent one non-native plant viral subgenomic promoter.
- 4. The recombinant plant viral nucleic acid of claim 3 wherein said plant viral coat protein coding sequence is a non-native coding sequence.
- 5. The recombinant plant viral nucleic acid of claim 3 wherein said plant viral coat protein coding sequence is a native coding sequence.
- 6. The recombinant plant viral nucleic acid of claim
  1 wherein the plant viral coat protein coding

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sequence is adjacent said native plant viral subgenomic promoter.

- 7. The recombinant plant viral nucleic acid of claim 6 wherein said plant viral coat protein coding sequence is a non-native coding sequence.
- 8. The recombinant plant viral nucleic acid of claim 6 wherein said plant viral coat protein coding sequence is a native coding sequence.
- 9. The recombinant plant viral nucleic acid of claim 2 wherein the plant viral coat protein coding sequence is adjacent one non-native plant viral subgenomic promoter.
- 10. The recombinant plant viral nucleic acid of claim 9 wherein said plant viral coat protein coding sequence is a non-native odding sequence.
- 11. The recombinant plant viral nucleic acid of claim 9 wherein said plant viral coat protein coding sequence is a native coding sequence.
- 12. The recombinant plant viral nucleic acid of claim 2 wherein the plant viral coat protein coding sequence is adjacent said native plant viral subgenomic promoter.
- The recombinant plant viral nucleic acid of claim 12 wherein said plant viral coat protein coding sequence is a non-native coding sequence.

- 14. The recombinant plant viral nucleic acid of claim 12 wherein said plant viral coat protein coding sequence is a native coding sequence.
- 15. The recombinant plant viral nucleic acid of claim 9 wherein one non-native nucleic acid sequence is adjacent said native plant viral subgenomic promoter.
- 16. The recombinant plant viral nucleic acid of claim 10 wherein one non-native nucleic acid sequence is adjacent said native plant viral subgenomic promoter.
- 17. The recombinant plant viral nucleic acid of claim 11 wherein one non-native nucleic acid sequence is adjacent said native plant viral subgenomic promoter.
- A recombinant plant viral nucleic acid 18. comprising a native plant viral subgenomic promoter, at least one non-native plant viral subgenomic promoter, a plant viral coat protein coding sequence, and at least one mon-native nucleic acid sequence, wherein said non-native plant viral subgenomic promoter is capable of initiating transcription of an adjacent nucleic agid sequence in a host plant and is incapable of recombination with the recombinant plant viral nuclei¢ acid subgenomic promoters, said recombinant plant viral nucleic acid is capable of systemic infection in a host plant, said plant viral coat protein coding sequence is selected from the group consisting of a native plant viral coat protein coding sequence and a non-native plant viral coat protein coding sequence, and said plant viral coat

protein coding sequence is adjacent one of the recombinant plant viral nucleic acid subgenomic promoters and said non-native nucleic acid sequence is adjacent one of the other plant viral subgenomic promoter.

- 19. The recombinant/plant viral nucleic acid of claim 18 wherein the plant viral coat protein coding sequence is adjacent one non-native plant viral subgenomic promoter.
- 20. The recombinant plant viral nucleic acid of claim 19 wherein said plant viral coat protein coding sequence is a non-native coding sequence.
- 21. The recombinant plant viral nucleic acid of claim 19 wherein said plant viral coat protein coding sequence is a native coding sequence.
- 22. The recombinant plant viral nucleic acid of claim 18 wherein the plant viral coat protein coding sequence is adjacent said native plant viral subgenomic promoter.
- 23. The recombinant plant viral nucleic acid of claim 22 wherein said plant viral coat protein coding sequence is a non-native coding sequence.
- 24. The recombinant plant viral nucleic acid of claim 22 wherein said plant viral coat protein coding sequence is a native coding sequence.
- The recombinant plant viral nucleic acid of claim 18 which comprises two or more non-native plant viral subgenomic promoters.

- 26. The recombinant plant viral nucleic acid of claim 25 which comprises two or more non-native nucleic acid sequence adjacent subgenomic promoters.
- 27. A host plant infected by the recombinant plant viral nucleic acid of claim 2.
- 28. A host plant infected by the recombinant plant viral nucleic acid of claim 9.
- 29. A host plant infected by the recombinant plant viral nucleic acid of claim 12.
- 30. A host plant in ected by the recombinant plant viral nucleic acid of claim 18.
- 31. A host plant infected by the recombinant plant viral nucleic acid of claim 19.
- 32. A host plant infected by the recombinant plant viral nucleic acid of claim 22.
- 33. A host plant infected by the recombinant plant viral nucleic acid of claim 26.
- 34. A process for producing a product in a host plant which comprises infecting a host plant with the recombinant plant viral nucleic acid of claim 2, and growing said infected plant for the production of said product.
- 35. The process of claim 34 which further comprises isolation of the product.

- 36. A process for producing a product in a host plant which comprises infecting a host plant with the recombinant plant viral nucleic acid of claim 18, and growing said infected plant for the production of said product.
- 37. The process of claim 36 which further comprises isolation of the product.
- 38. A process for producing a product in a host plant which comprises infecting a host plant with the recombinant plant viral nucleic acid of claim 26, and growing said infected plant for the production of said product.
- 39. The process of claim 38 which further comprises isolation of the product.
- 40. The process of claim 38 wherein said product is a biologically active polypeptide or protein.
- The process of claim 40 wherein said product is selected from the group consisting of IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, EPO, C-CSF, GM-CSF, hPG-CSF, M-CSF, Factor VIII, Factor IX, tPA, hGH, receptors, receptor antagonists, antibodies, neuro-polypeptides, melanin, insulin, vaccines and the like.
- 42. The process of claim 38 wherein said product is biologically inactive polypeptide or protein resulting from anti-sense RNA expression.

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- 43. A biologically functional plasmid or viral DNA vector having the characteristics of TB2 (ATCC No. 75280) and mutants thereof.
- 44. A biologically functional plasmid or viral DNA vector having the characteristics of TBU5 and mutants thereof.

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